Fast Facts
CALIFORNIA DEPARTMENT OF HEALTH SERVICES
PS2

AN EMERGING INFECTIOUS DISEASES AND FOOD SAFETY PROGRAM FOR CALIFORNIA

Background

Twenty years ago, experts thought infectious diseases were on the verge of extinction. Today they remain great killers, and new diseases are identified virtually every year. Nearly all emerging infectious diseases of national concern exist in California, including *E. coli* O157:H7, *Cyclospora*, group A streptococcal infections, valley fever, Salmonella Enteritidis, AIDS, hantavirus pulmonary syndrome, and antimicrobial-resistant pathogens.

The costs of these new emerging infections in terms of human lives, suffering, health care expenditures, lost productivity, and economic damage to California businesses are staggering. In the United States, death rates due to infectious diseases other than AIDS increased 22 percent between 1980 and 1992.

The Department of Health Services (DHS), in cooperation with the University of California at Berkeley, currently operates an emerging infectious disease program in three Bay Area counties that is funded by the federal Centers for Disease Control and Prevention.

The Program

To address the threats to the public's health posed by these diseases and to California's agricultural industries, the 1998-99 budget funded an expanded statewide emerging infectious diseases and food safety program within DHS.

The program enables DHS to: 1) strengthen outbreak control capacity to contain the spread of disease; 2) improve laboratory diagnostic methods; 3) enhance efforts to educate health care providers and the general public about emerging infectious diseases; and 4) in partnership with the California Department of Food and Agriculture (CDFA), prioritize food safety and foodborne illness prevention by addressing food production practices and retail food safety.

The expanded emerging infectious diseases and food safety program evolved from recommendations developed by three committees of experts convened by the National Academy of Sciences and the federal Centers for Disease Control and Prevention.

Among other things, the program funded a regional emerging infectious disease response team to assist local health departments in investigating and controlling outbreaks. The team is based in the state's major Southern California population center (Los Angeles) and includes a physician and a research scientist.

The program also provided DHS with resources to educate health care providers and the public about emerging infectious disease and food safety issues; conduct investigations in cooperation with other authorities, food growers, producers, and processors implicated in outbreaks; work with the agricultural industry through CDFA to find ways of preventing illnesses linked to food products; determine how emerging infections are transmitted, and how to stop their transmission; develop new laboratory tests; assist hospitals and other health facilities in tracking and reducing the spread of these infections; and determine patient morbidity and mortality.

Some Facts About Emerging Infectious Diseases

A number of infectious diseases have emerged or re-emerged in California to cause increased illness, hospitalization, death, and health care costs:

***E. coli* O157:H7** was first isolated in 1982 when 47 persons suffered bloody diarrhea after eating contaminated hamburgers. Since then, this organism has been recognized as a major foodborne pathogen and an important cause of kidney failure and death in children. In 1993, a large outbreak involving four western states, including California, resulted in 732 persons becoming ill, 195 hospitalizations, 55 cases of renal failure, and 4 child fatalities. In 1996, another outbreak involving unpasteurized apple juice produced in California resulted in over 60 illnesses and one death.

Cyclospora was relatively unknown in the United States until 1996 when an explosive outbreak in 20 states and one Canadian province involved over 1,000 illnesses associated with the consumption of fresh berries. Although the outbreaks were eventually traced to imported (Guatemalan) raspberries, an estimated $16 to $20 million loss was incurred by California's strawberry industry, which had been wrongly implicated, initially, by an investigation elsewhere. In 1997, imported raspberries (again, from Guatemala) were implicated in outbreaks in several states, including California.

"Flesh-eating" or Invasive group A streptococcal infection has re-emerged in California. An estimated 1,200 to 1,800 cases of this infection occur in California each year, resulting in over 200 deaths.

Salmonella Enteritidis was first recognized in the northeastern states in the 1980s and recently became the predominant Salmonella serotype in California. With the average total hospitalization charges for patients with Salmonella Enteritidis in California estimated at $12,000 per case, the annual health care costs due to this pathogen have been in the millions.

Hantavirus pulmonary syndrome (HPS) is a severe respiratory illness that continues to kill nearly 50 percent of its victims. HPS illnesses in California were first recognized in 1993. As of December 2000, the number of recognized cases is small (33 cases resulting in 14 deaths), but the potential for exposure is likely greater, given that deer mice carrying this virus are prevalent throughout most of California.

Drug Resistant Pathogens: Bacteria resistant to available antibiotics, particularly vancomycin-resistant enterococci (VRE), have recently emerged. VRE has been recognized in California since 1994. Vancomycin is often the last-line antibiotic that can be used to treat resistant infections. When this can no longer be used, patient survival is in jeopardy.